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(57) Abstract

Double stranded nucleic acid duplexes serve as universal harvestable and cleavable link systems in a variety of different types of immnuoassays (e.g., sandwich, competitive, etc.). Depending upon the type of assay, at least one specific component involved in the assay system is attached to a first member of a pair of sequences forming a double stranded nucleic acid (i.e., two oligonucleotides comprising substantially complementary sequences). The assay is carried out in the presence of a support to which is attached an oligonucleotide which is the other member of the pair of sequences forming a double-stranded nucleic acid duplex under hybridization conditions. Upon the hybridization of the two complementary oligonucleotides to form a duplex, the component of the assay system to which the first member of the pair of oligonucleotides is attached may thereby be effectively removed from the solution phase and harvested onto the support. Oligonucleotides bound to a support are reusable in multiple successive assays. Moreover, any given support-bound oligonucleotide can be used in accordance with the present invention for the analysis of a variety of different analytes. In many cases, the assay system includes a label to facilitate quantifying the amount of analyte; in others, the amount of analyte may be determined without the use of any extraneous label.